

Before the
FEDERAL COMMUNICATIONS COMMISSIONS
Washington, D. C. 20554

In the Matter of)
)
Improving Public Safety Communications) WT Docket No. 02-55
In the 800 MHz Band)
)
Consolidating the 900 MHz Industrial/Land)
Transportation and Business Pool Channels)

To: The Commission

Comments of Peak Relay, Inc. To
Supplemental Comments of the Consensus Parties

Pursuant to that Public Notice entitled *Wireless Telecommunications Bureau Seeks Comment On "Supplemental Comments Of the Consensus Parties" Filed In the 800 MHz. Public Safety Interference Proceeding – WT Docket No. 02-55, DA 03-19* (released January 3, 2003), Peak Relay, Inc (Peak) hereby submits its comments in opposition to that document entitled "Supplemental Comments of the Consensus Parties" (Supplement) dated December 24, 2002 filed within this proceeding by those parties referenced "Consensus Parties." Peak respectfully requests that this electronically wired document be included in the record of this proceeding as a necessary response to that Supplement, which response could not have been made previously.

BACKGROUND

Peak Relay, Inc. (Peak) is a provider of 800 MHz. SMR service in San Diego County. The majority of our customers utilize the team concept of operating their businesses; thereby rendering the one to one communication format provided by cellular and Nextel as cost prohibitive. Peak needs to insure that customers can continue to receive the same type of communications in the future that only the 800 MHz. Offset band has been able to provide in San Diego County, and without interference from Nextel.

The Problem:

Private Land Mobile Radio Service (PLMRS) eligibles in San Diego County historically have been short changed in their access to usable radio channels. The inadequacies arise from several geographical and regulatory factors, discussed below. While many of the other major US metropolitan areas are now at saturation using the present PLMRS channels, the deficit of frequencies in San Diego County is qualitatively different from the rest of the country.

Origins of the Problem:

San Diego County, with a population approaching 3 million, geographically is situated between Los Angeles/Orange Counties to the north, and the Mexican border to the south. The northern counties with combined populations exceeding 10 million, utilize private vehicles for the bulk of the transportation of people and goods; mass public transportation is not well developed. Consequently, there exists a continuing and seemingly inexhaustible demand for mobile radio communications, much of which is met through use of PLMRS frequencies. Historically, every new frequency made available by the Commission to Part 90 eligibles has been rapidly pressed into service in the LA/Orange Counties geographical area.

Mexico, whose border with the United States is located approximately 25 miles south of the City of San Diego, also has access to all present PLMRS frequency bands (consistent with ITU allocations). To protect its own interest, the Mexican federal government, exercising its treaty rights with the United States, has placed reservations on United States' use of some PLMRS frequency bands in an area extending northward from the border to a distance of 110 kilometers; this includes virtually all of San Diego County. Mexican eligibles have a plethora of PLMRS frequencies available to them, some of which cannot be co-shared by San Diego County eligibles.

Thus the situation obtains wherein all PLMRS frequencies are available to eligibles in Los Angeles/Orange County and most to Mexican eligibles. At the same time, some of these frequencies have not been allocated to San Diego County eligibles (e.g., 470 – 512 MHz), while the use in San Diego County of others has been restricted or delayed by the Mexican federal government. San Diego County has less of the PLMRS radio frequency spectrum allocated to them than either Los Angeles/Orange Counties or Mexico, and, most importantly, every frequency now available to San Diego County eligibles is also available to eligibles in the major populations centers immediately north and south of San Diego County. Thus San Diego County eligibles have “no place to hide”; all communications are subject to impact from equivalent co-channel communications from the north, and often also from the south.

But the San Diego County communications environment is degraded even more severely by another problem. Special radio frequency propagation effects exist within the southern California geographical region. The same prevalent conditions of atmospheric phenomenon known as “smog” also greatly affect propagation of PLMRS radio signals across the region. The atmospheric temperature inversion produce, at low altitudes in the troposphere (1,000 to 5,000 feet), regions of discontinuity between air masses. These regions form “ducts”, which serve as “wave guides”, channeling radio frequency energy from PLMRS transmitters and delivering it with very small attenuation over long distances (100+ miles) to other PLMRS receivers. This effect, which has been observed in southern California for at least 40 years, occurs at frequencies from 30 MHz to the microwave region (2 GHz) and quite possibly even higher.

The practical effects of tropospheric ducting upon PLMRS communications aggravate an already difficult situation. Ducting may occur at any time of the year, but it is generally most prevalent during warmer weather and the summer months. Recently San Diego hosted the Super Bowl. At Qualcomm Stadium the official temperature was 82 degrees F on that January day. On days in which such ducts form, emissions from PLMRS stations in Los Angeles/Orange Counties, propagated through the ducts, produce signal strengths at the receivers of San Diego County licensees (both mobile and base stations) sufficiently great to cause appreciable interference to reception of signals from their associated San Diego County stations. At such times, PLMRS communications among San Diego licensees can become virtually impossible.

Finally, at various times and on various frequency bands San Diego County licensees have requested from the Commission protection against co-channel interference from PLMRS base stations located on high mountains in the Los Angeles/Orange County metropolitan area. Such protective actions generally have not been implemented by operators of these base stations; and the Commission's Field Operation Bureau has not been effective in remedying the problems.

Given this dismal recounting of San Diego's history, it may seem remarkable that San Diego County has any usable PLMRS channels at all. We have suffered continuing restrictions concerning frequencies available for our eligibles, and continuing conflict from the channel dominance generated by Los Angeles/Orange County for those channels to which we do have access. For more than a decade we pleaded for regulatory relief from the Commission; only once have we received it: **in the issuance of 800 MHz PLMRS channels which were "offset" by one-half channel from those utilized in the balance of southern California and northern Baja California.** Even then, the Commission later recanted and authorized operation by San Bernardino County Public Safety eligibles on the San Diego County "offset" channels. Though these "offset" channels were still susceptible to inference from our neighbors, the problems were significantly reduced from our previous experience.

COMMENTS

Peak hopes that the Federal Communications Commission will keep these recommendations by the "Consensus Parties" in prospective and in comparison to the comments filed previously in this matter.

Since the channels in San Diego are different than the rest of the market, we will never be in alignment with and interoperable with the rest of the country. The Federal Communication Commissions need to consider different factors in determining what, if any, rebanding is appropriate. In the advent that the Commission is seriously considering the "Consensus Parties" comments for San Diego County Border area, we add the following.

The Consensus Parties' Plan Is Not Workable in San Diego County.

One of the primary arguments Nextel put forth for rebanding was to eliminate interleaved channels. For example, the Nextel plan call for special NPSPAC channels that are nationwide. However, because of the shortage of available frequencies in San Diego, the NPSPAC channels will have to operate on different frequencies than most of the rest of the country. How, then would it be possible to communicate in the roam mode with other NPSPAC users even only as far away as Los Angeles? This also leads to the resulting problems of all the frequencies in San Diego that appear to be merely shifted up the band. None of the new allocations will be matched up with Los Angeles/Orange Counties and this completely negates any reason for moving spectrum in the first place--the interleaved situation has not been relieved. Why move at all if this is the case?

Additionally, there isn't enough room for all B/ILT Users in the guard band and those channels seem to be headed to the interleaved channels with Mexico that should be low site, low power. Those who aren't causing a problem should not end up with less capacity than they now have for the sake of an unachievable symmetry with the nationwide allocation.

Does the rebanding increase the likelihood of interference to public safety systems from systems operating in Mexico? CMRS/public safety interference may be a problem in many markets, but the difficulty, almost impossibility, of correcting interference from Mexican systems makes it a worse problem than getting Nextel to take care of interference. In particular, will public safety be relocated to any spectrum on which Mexico has primary operating authority?

What, if any, benefit does public safety (or non interfering incumbents) derive from being rebanded in the light of the unique characteristics of San Diego? The issue shouldn't be why not do it even if Nextel is prepared to pay the tab, it should be what public interest would be served by this disruption.

The Technical Standards do not Reflect Reasonable Parameters

In laying the groundwork for parameters of operation, the "Consenses Parties" plan calls for parameters that do not reflect accurate and current technical standards that are being utilized in our band. For example, the plan audaciously throws out the parameter of -98 dBm as a minimum standard for a transmission citing that "weaker signals are typically not reliable in real world applications." In the real world of San Diego County we can easily use signals at -120 dBm and lower. San Diego is characteristically hilly, and even mountainous. Relay sites operate at the most power allowable by the FCC. Receivers need to be sensitive to operate. Just this technical designation alone appears designed to protect Nextel from having to cure interference problems they are causing. Standards must reflect all operations on 800 MHz such as those employed by Peak and the public safety community.

The plan offers interference protection from Nextel by moving public safety away from Nextel frequencies and using a guard band. The guard band is earmarked for SMR operators, like Peak who provide communications to business and industrial customers. In this guard band, the “Consensus Parties” call for another 35 dBm increase or –60dBm which we would consider a dead receiver. The plan does nothing to protect our customers from Nextel interference, and offers no satisfactory remedy for relief. Why should we have to basically employ a useless receiver when Nextel should not be putting out a signal that would interfere with our receive signal in the first place?

Peak is wary of a negotiator, confirmed by Nextel, without some kind of framework specifying parameters that keep our equipment protected and a plan without penalties should an interfering station refuse to comply with those requirements. Within the next thirty day, we will submit concrete parameters from our manufacturers that reflect the real world.

Conclusion

While Peak has serious reservations about the Consensus Plan in general, its specific knowledge of the San Diego market indicates that the plan will not achieve the nationwide objectives set by the Federal Communications Commission and would adversely impact a number of operating entities in the market with no countervailing benefit. San Diego is an important and growing U. S. city with critical military operations. We ask the Commission to reject the border plan for San Diego County. If rebanding is the order of the day for the rest of the country, we ask that the FCC carefully craft the Los Angeles allocations so that they do not cause further interference to it southern neighbors.

